

Title: Isolated Polynucleotides and Polypeptides Relating to Loci  
Underlying Resistance to Soybean Cyst Nematode and Soybean  
Sudden Death Syndrome and Methods Employing Same  
Applicant(s): Lightfoot et al.  
Serial No.: 09/772,134

ECTAMAGG113

CTAF

ALLELE 1: 1	TTAAGGGATATGTTTCACTAATG-CtGTAAAATTCAACCC--AGATTTTGATTTtttggaaaaatgt
ALLELE 2: 1	TTAAGGGATATGTTTCACTAATGtc-GTAAAAATTCAACCCcaA-ATTTTGATTT

EccGMAAC405

A2D8F

EIG 1a-1

ALLELE1:	365	CCAAGAGAAACTCTGGAAAGCAACGGGAATTC	397
ALLELE2:	373	CCAAGAGAAACTCTGGAAAGCAACGGGAATTC	405

**EccgMca116**  
Allele 1: 1 GAATTCCGGTATCTAGACAACCTTGTGGTTAGTAAAGACACGATTAT  
Allele 2: 1 GAATTCTGGTATCTAGACAACCTTGTGGTTAGTAAAGACACGATTAT  
Allele 1: 60 CCAGGGCTTGAAGGGCATAGAAATAATTCTTATATAAAAGTCTCTTAA  
Allele 2: 60 CCAGGGCTTGAAGGGCATAGAAATAATTCTTATATAAAAGTCTCTTAA

**EArgMca87**  
Allele 1: 1 GAATTCTGGTCTCTTAT----GACATTGTTGCAAGTAATACTACTATAAATTCAAGATTGGTT  
Allele 2: 1 GAATTCTGGTCTCTTATGACATTGTTGCAAGTAATACTACTATAAATTCAAGATTGGTT  
Allele 1: 68 CTGATAACCGTGGTGTAA 87  
Allele 2: 73 CAGATAACCGTGGTGTAA 92

**Eccc Matc161**  
ALLELE1: 1 TAAATGAAAATGATCAAATCAAATAATATGCTTTTTAGTTG-gTTCAGT-ACT  
ALLELE2: 1 TAAATGAAAATGATCAAATCAAATAATATGCTTTTTAGTTG-TTCAGT-ACT  
ALLELE1: 61 TTTTTTATTGAAAATGACCCAAAGTGAACACATGTTGAGAGGGAAATC 116  
ALLELE2: 62 TTTTTTATTGAAAATGACCCAAAGTGAACACATGTTGAGAGGGAAATC 117  
ALLELE1: 117 GCATCCAAACGTTCTGTACAATCACTGAGAGGGAAATC 161  
ALLELE2: 118 GCATCCAAACGTTCTGTACAATCACTGAGAGGGAAATC 162

**EccAMaggc114**  
ALLELE1: 1 GAATTCCAGGC-AGATTGTATCAAACATGTTGCCACAAATGTTCAAGCATCTTA 59  
ALLELE2: 1 GAATTCCAG-CTAGATTGTATCAAACATGTTGCCACAAATGTTCAAGCATCTTA 59  
ALLELE1: 60 GGGAACTGCTTACTCTTAAATTGACATCCAAAGTGTGCTTAA 114  
ALLELE2: 60 GGGAACTGCTTACTCTTAAATTGACATCCAAAGTGTGCTTAA 114

**FIG. 1a-2**

Title: Isolated Polynucleotides and Polypeptides Relating to Loci  
Underlying Resistance to Soybean Cyst Nematode and Soybean  
Sudden Death Syndrome and Methods Employing Same

**EATgM<sub>CGA</sub>87** BAC extension and TaqMan probe and primers

	ttatcatccaaaattaaaaattgaaaaactttaatacaaataatggagccattcatgtc         ttatcatccaaaattaaaaattgaaaaactttaatacaaataatggagccattcatgtc	<i>TMA5-RE</i>
Allele 1:	atctcttggtctgagtcattcatctgtggattgattcatggttttctttat-----GACATGTT         atctcttggtctgagtcattcatctgtggattgattcatggttttctttatGACATGTT	<i>TMA5R</i>
Allele 2:		<i>TMA5-S</i>
Allele 1:	GCCAAGTAATACTACTATAATTCAAGATTGGGTTCTGATAACCGTGGTCGTTAAactataataacc         GCCAAGTAATACTACTATAATTCAAGATTGGGTTCTGATAACCGTGGTCGTTAAactataataacc	<i>ATG4BACF</i>
Allele 2:		

FIG. 1b

Title: Isolated Polynucleotides and Polypeptides Relating to Loci Underlying Resistance to Soybean Cyst Nematode and Soybean Sudden Death Syndrome and Methods Employing Same  
Applicant(s): Lightfoot et al.  
Serial No.: 09/772,134

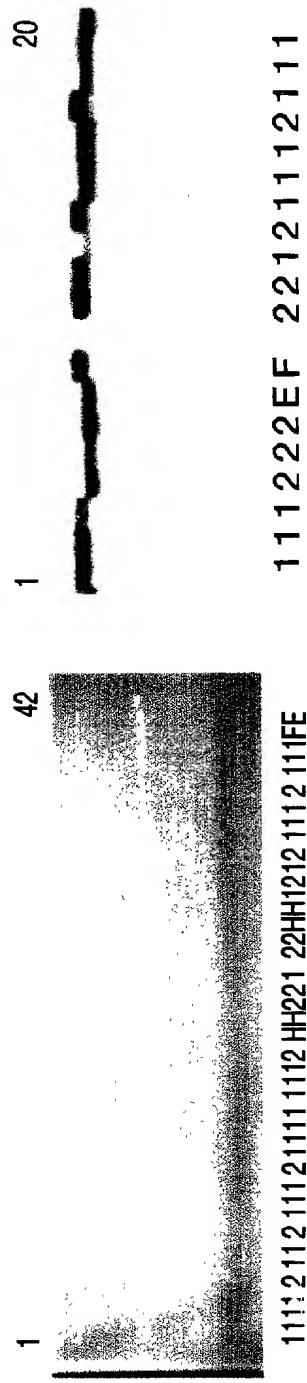


FIG. 2A FIG. 2B

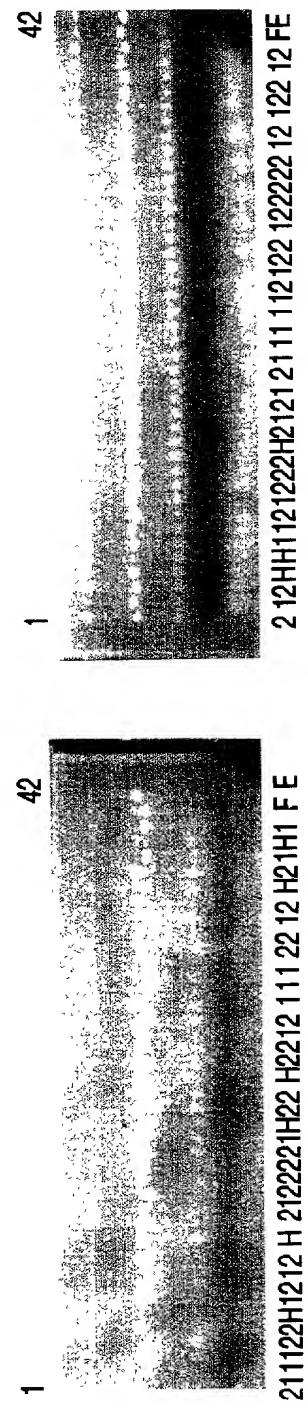
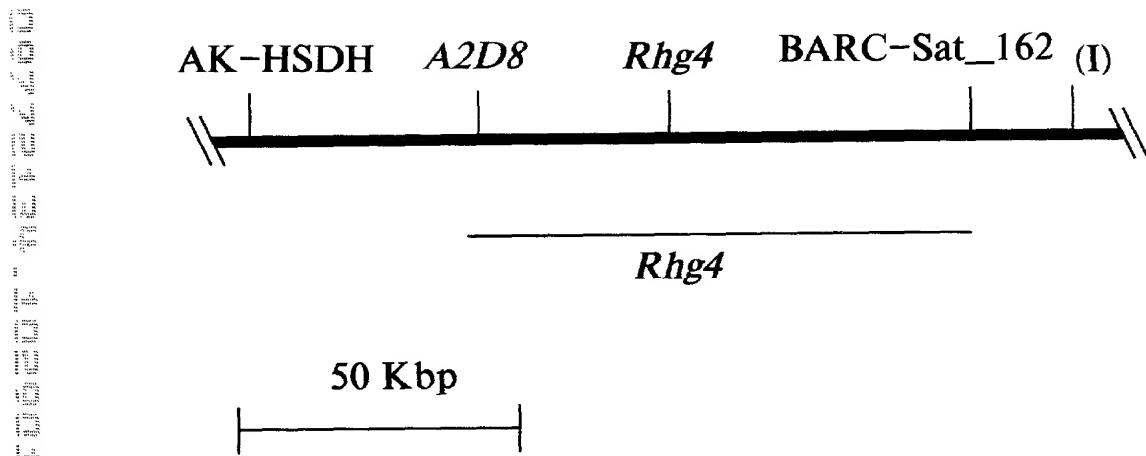


FIG. 2C FIG. 2D

Title: Isolated Polynucleotides and Polypeptides Relating to Loci  
Underlying Resistance to Soybean Cyst Nematode and Soybean  
Sudden Death Syndrome and Methods Employing Same  
Applicant(s): Lightfoot et al.  
Serial No.: 09/772,134



**FIG. 3**

Title. Isolated Polynucleotides and Polypeptides Relating to Loci  
Underlying Resistance to Soybean Cyst Nematode and Soybean  
Sudden Death Syndrome and Methods Employing Same  
Applicant(s): Lightfoot et al.  
Serial No.: 09/772,134

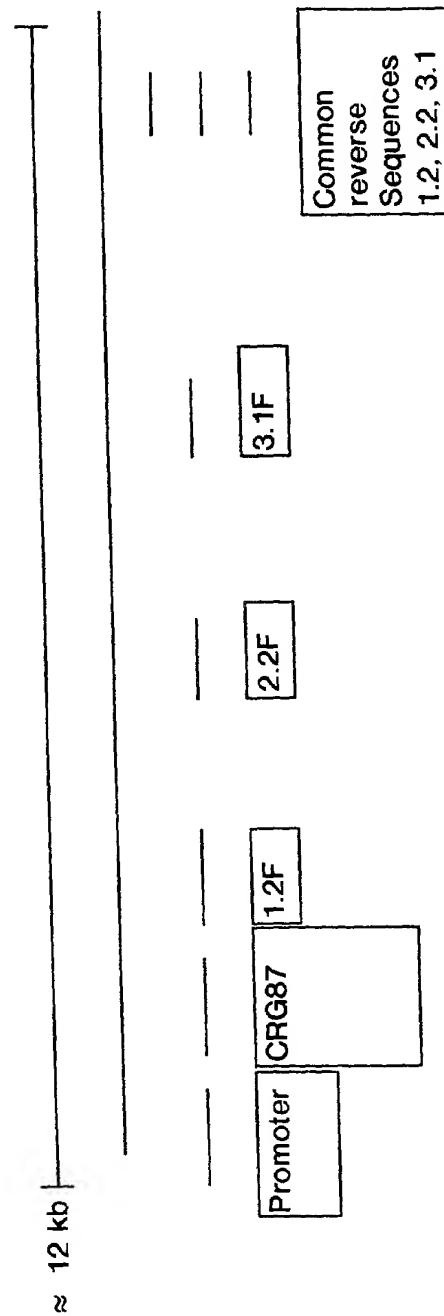


FIG. 4

Title Isolated Polynucleotides and Polypeptides Relating to Loci  
Underlying Resistance to Soybean Cyst Nematode and Soybean  
Sudden Death Syndrome and Methods Employing Same  
Applicant(s): Lightfoot et al.  
Serial No.: 09/772,134

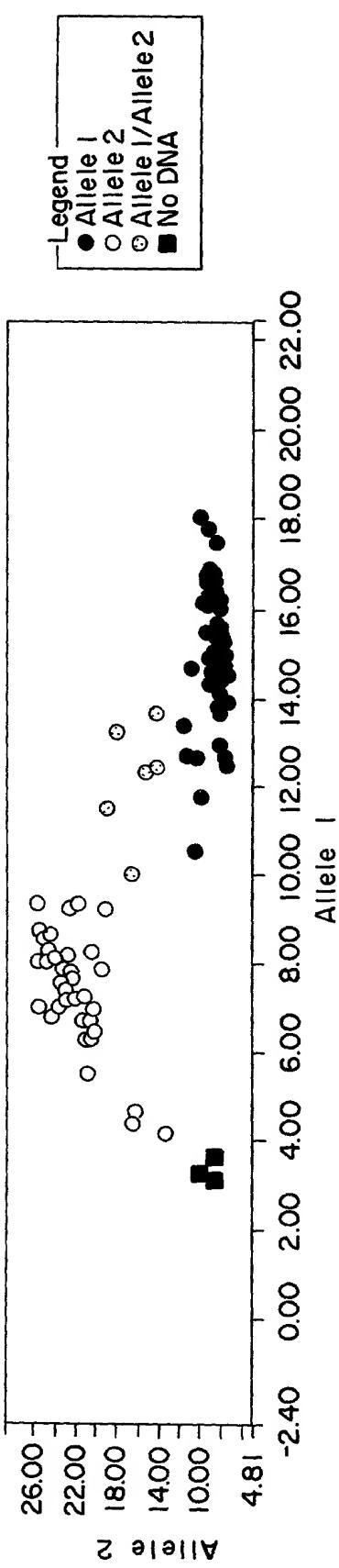


FIG. 5A

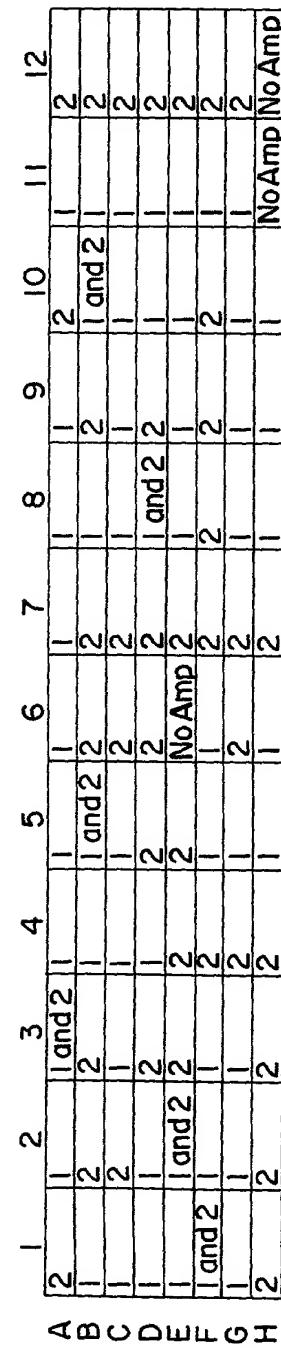
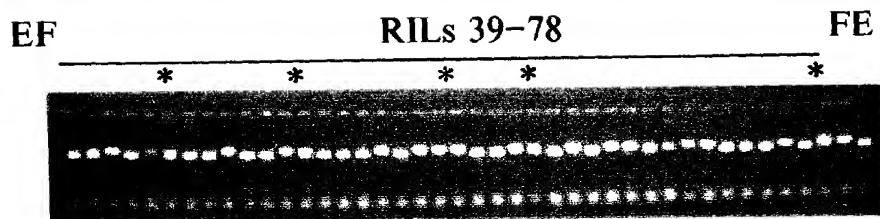
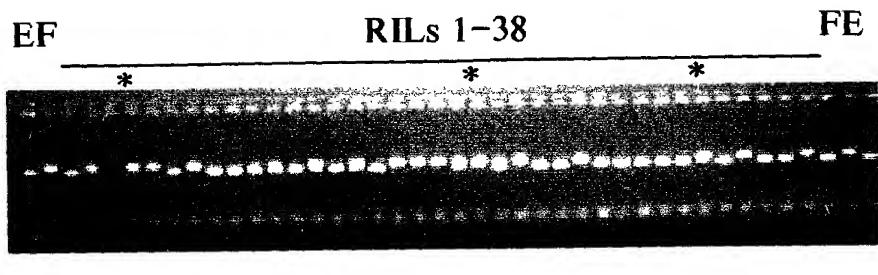


FIG. 5B

Title Isolated Polynucleotides and Polypeptides Relating to Loci  
Underlying Resistance to Soybean Cyst Nematode and Soybean  
Sudden Death Syndrome and Methods Employing Same  
Applicant(s): Lightfoot et al.  
Serial No.: 09/772,134

## FIG. 6A



## FIG. 6B

Synthetic rhg1 gene

1  
AATGGGAGGAGTGGGAAAGACAGTGGCTATGGAGCTTGGTCCGGAGGTTGGGTTGGAAT  
CAAGTGTGCTCAGGGACAGGTTATTGTGATCCAGCTTCCCTTGAAGGGTTGAGGGGTC  
GAATCACCGACAAAATTGGCCAACCTCAAGGCCTCAGGAAGCTTAGTCTTCATGATAAC  
CAAATTGGTGGTTCAATCCCTCAACTTGGACTTCTTCCAAACCTAGAGGGTTCA  
GTTATTCAACAATAGGCTTACAGGTTCCATACCTCTTCTTAGGTTCTGCCTTGCT  
TCAAGTCTCTGACCTCAGCAACAATTGCTCACAGGAGCAATCCCTATAGTCTTGCT  
AATTCCACTAAGCTTATTGGCTTAACCTGAGTTCAACTCCTCTGGTCCTTAC  
AGCTAGCCTAACACTCACTCATTCTCACTTTCTTCTCAA  
CTGGCTCCCTCTAACACTTGGGGGGAAATTCCAAGAATGGCTTCTTAGGCTTCAA  
AATTGATCCTAGATCATAACTTTCACTGGTGACGTTCTGCTTCTTGGTAGCTT  
AAGAGAGCTCAATGAGATTCCCTAGTCATAATAAGTTAGTGGAGCTACCAAAATG  
AAATAGGAACCCCTTCTAGGCTTAAGACACTTGACATTCTAATAATGCCTGAATGGG  
AACTTGCCCTGCTACCCCTCTAATTATCCTCACTACACTGCTGAATGCAGAGAACAA  
CCTCCTGACAATCAAATCCCTCAAAGTTAGGTAGATTGCGTAATCTTCTGTTCTGA  
TTTGAGTAGAAACCAATTAGTGGACATATTCTCAAGCATTGCAAACATTCCCTCG  
CTTAGGCAGCTGATTGCACTGAATAATTCACTGGAGAAATTCCAGTCTCCTTGA  
CAGTCAGCGCAGTCTAAATCTTCAATGTTCTACAATAGCCTCTCAGGTTCTGTCC  
CCCCTCTGCTTGCCTAACAGAAATTAACTCAAGCTCATTGTGGAAATATTCAACTATGT  
GGGTACAGCCCTCAACCCATGCTTCCAGCTCCATCACAAGGAGTCATTGCC  
ACCTCCTGAAGTGTCAAAACATCACCACATAGGAAGCTAACGACCAAAGACATAATT  
TCATAGTAGCAGGAGTTCTCCTCGTAGTCTGATTATACTTTGTTGTCCTGCTTTC  
TGCCTGATCAGAAAGAGATCAACATCTAGGCCGGAACGGCCAAGCCACCCGAGGGTAG  
AGCGGCCACTATGAGGACAGAAAAAGGAGTCCCTCCAGTTGCTGGTGGTAGTTGAAG  
CAGGTGGGGAGGGCTGGAGGGAAACTAGTCCATTGATGGACCAATGGCTTACAGCT  
GATGATCTCTGTGTGCAACAGCTGAGATCATGGAAAGAGCACCTATGGAACCTGTTA  
TAAGGCTATTGGAGGATGGAAGTCAAGTGCAGTAAAGAGATTGAGGGAAAGATCA  
CTAAAGGTCAAGAGAATTGAATCAGAAGTCAGTGTCTAGGAAAATTAGACACCC  
AATGTTTGGCTCTGAGGCCATTACTTGGACCCAAAGGGAAAGCTTCTGGGTT  
TGATACATGTCTAAAGGAAGTCTGCTTCTTCCATGGAGGTTCTGTGCTGGTT  
CTTCTATTAAAGTGTGTGCTGGTCTTAATTATAATTGGAGTTACCTTAGT  
AATCTGTATAATTCTAATCGGAGAACAGTACAAACAAAACACCTAAGGAACACACCT  
TANCTTAATATACCATATCAATAAGTGAATATTCTTCTTGGTCATCTGATGCAGGG  
GGAACATGAACATTCAATTGGCCACAAGATTAAAATGCCAACGCTTGGCCGGGCT  
TGTTGCTTCAATTCCCAGGAGAACATCATACATGGACCTCNCATCCAGCAATGTGTG  
GCTTGATGAAAACAAATGCTAAATTCAAGTGTCTTGGTCATCTGATGTCAAC  
TGCTGCTAATTCCAACGTGATAGCTACAGCTGGAGCATTGGATACCGGGCACCTGAGCT  
CTCAAAGCTCAAGAAAGCAAACACTAAAACAGTATCTACAGTCTGGTGTATCTTGT  
TAGAACTCCTAACGAGGAAATCACCTGGGTGTCTATGAATGGACTAGATTGCTCAG  
TGGGTTGCCTCAGTTGCTAAAGAGGAGTGGACAAATGAGGTTTTGATGCAAGACTTGAT  
GAGAGATGCATCCACAGTTGGCGACGAGTTGCTAAACACGTTGAAGCTGCTTGC  
GTGTTGATCCTTCTCCATCAGCACGACCAAGGTTCATCAAGTTCTCAGCAGCTGAAG  
AGATTAGACCAGAGAGATCAGTCACAGCCAGTCCCAGGACGATATCGTATAGCACAA  
TTTGCATTGATTGGCTAAATGTAGTAGGCCTACTATATATGTTCTATGAT

FIG. 7A

Title: Isolated Polynucleotides and Polypeptides Relating to Loci  
Underlying Resistance to Soybean Cyst Nematode and Soybean  
Sudden Death Syndrome and Methods Employing Same  
Applicant(s): Lightfoot et al.  
Serial No.: 09/772,134

100 200 300 400 500 600 700 800 900 1000  
TCTTCATTCTTATATTATTTGCCTGTTGAATGCTTGAATTGTACATACTCATACT  
TACAATAAGGTGAGTCGGTTAATTACCTCACCTCAAAGCTGGGGTGTATTCT  
GTTTCCTCCAAGGCACATAATAGTTGAAAATAGTTCTCAGGAGCATTGTTATT  
TGCAAGATTCTCTTCACGGCTGCTATCTTCTATGCATGCCCTGCCATAATGCATTA  
TGAAGAATTGTAACGGCTGTGTTTGGACTTCTTCAAAAGTTATGTTATTGCCAGG  
TGTATATATCAACATGTTTAAAGATTTCAAACAACTCAGGTTAGATGTGGGTTGC  
ATGCATGAGATTGGACTAGTGCCTGATGTAGTATAAAATATAAATTGTCCAATCAAG  
CACCCCTCTACATGTCCAATAATGGCCTTATGAAACTTAATTTTAATTACAAACTA  
CAGTAATCTTTGAATAAAGATTACAAATTACACNGACATGTGAAGCNGCATCTT  
NATTGNCAATCTTCAAGTTACTCTATTATTTCTGCN

3105bp

## FIG. 7B

Rhg1 Peptide

NGRSGKDSGYGACSGGWVGIKCAQGQVIVIQLPWKGLRGRIT  
DKIGQLQGLRKLSSLHDNQIGGSIPSTLGLPNLRGVQLFNNRLG  
SIP

LSLGFCPILLQSLDLSNNNLLTGAIP  
YSLANSTKLYWLNLNSFNSFSGPLP  
ASLTHSFSLTFLSLQNNNLGSGLPNNSWGG  
NSKNGFFRLQNLILDHNFFTGDVP  
ASLGSLRELNEISLSHNKFGAIP  
NEIGTLSRLKTLDISNNALNGNLP  
ATLSNLSSLTLLNAENNLLDNQIP  
QSLGRLRNLSVLILSRNQFSGHIP  
SSIANISSLRQLDLSLNNFSGEIP  
VSFDSQRSLNLSNVSYNSLSGSVP

PLLAKKFNSSSFVGNIQLCGYSP

STPCLSQ

APSQGVIAPPPEVSKHHHHR

KLSTKDIILIVAGVLLVVLIILCVLLFCLIRKRS

TSKAGNGQATEGRAATMRTEKGVPVAGGDVEAGGEAGGKLVHF  
DGPMMAFTADDLLCATAEIMGKSTYGTVYKAILEDGSQAVKRLR  
EKITKGHREFESEVSVLGKIRHPNGLALRAYYLGPGEKLLVFD  
YMSKGGLLFYMEGSCAGSFIKVLCVLVFNYNLEFYLSNLYNSN  
RRTVQTKTPKEQHLXFNIPYQ

-SEIFSWSS-CRGN-TFIIGHKMKIXQDLAVACSPSFPESTYMD  
LXSSNV CX-NXMLKLQFWFSFSDVNCC-FQRDSYSWSIGIPGT-  
ALKAQESKH-N-YLQSWCYLVRTPNEEITWGVYEWTRFASVGCL  
SCQRGVDK-GF-CRLDERCIHSWRRVAKHVEARFALC-SFSIS  
TTRSSSSSPAAGR D-TREISHSQSHLPGRPLEPYSESY

FIG. 7C

Title: Isolated Polynucleotides and Polypeptides Relating to Loci  
Underlying Resistance to Soybean Cyst Nematode and Soybean  
Sudden Death Syndrome and Methods Employing Same  
Applicant(s): Lightfoot et al.  
Serial No.: 09/772,134

Sequences producing significant alignments:	Score (bits)	E Value
pir:T46070 hypothetical protein T18N14.120 - Arabidopsis thaliana	632	e-180
pir:T47727 hypothetical protein F18O21.60 - Arabidopsis thaliana	344	1e-95
pir:T04587 hypothetical protein F23E13.70 - Arabidopsis thaliana	268	9e-71
pir:T49038 hypothetical protein T5P19.20 - Arabidopsis thaliana	257	2e-67
pir:T48210 hypothetical protein T20L15.160 - Arabidopsis thaliana	241	1e-62
pir:T05050 protein kinase homolog M3E9.30 - Arabidopsis thaliana	238	2e-61
pir:T18536 receptor-like protein kinase - Ipomoea nil (Japanese...	236	3e-61
pir:T48489 receptor-like protein kinase - Arabidopsis thaliana	236	5e-61
pir:T10515 disease resistance protein Cf-2.2 - currant tomato	235	6e-61
pir:T10504 disease resistance protein Cf-2.1 - currant tomato	235	6e-61
pir:T30553 disease resistance protein Hcr2-5D - tomato	229	4e-59
pir:S27756 receptor-like protein kinase 5 (EC 2.7.1.-) precurso...	227	1e-58
pir:T48499 receptor-like protein kinase-like protein - Arabidop...	226	3e-58
pir:T46033 receptor protein kinase-like protein - Arabidopsis t...	226	4e-58
pir:T05335 hypothetical protein F1C12.190 - Arabidopsis thaliana	221	1e-56
pir:T10636 hypothetical protein T13K14.100 - Arabidopsis thaliana	219	7e-56
pir:T05898 hypothetical protein F6H11.170 - Arabidopsis thaliana	218	1e-55
pir:T45717 receptor-kinase like protein - Arabidopsis thaliana	212	7e-54
pir:T05322 hypothetical protein F18F4.240 - Arabidopsis thaliana	211	1e-53
pir:T10659 probable serine/threonine-specific protein kinase (E...	211	2e-53
pir:T03784 probable receptor protein kinase - rice	208	1e-52
pir:T50851 receptor protein kinase homolog [imported] - soybean	201	1e-50
pir:T45647 receptor protein kinase-like protein - Arabidopsis t...	199	5e-50
pir:T45718 receptor-kinase like protein - Arabidopsis thaliana	199	7e-50
pir:T50850 receptor protein kinase homolog [imported] - soybean	199	7e-50
pir:T45645 receptor kinase-like protein - Arabidopsis thaliana	196	3e-49
pir:T09356 brassinosteroid-insensitive protein BRI1 - Arabidops...	196	3e-49
pir:T00712 protein kinase homolog F22O13.7 - Arabidopsis thaliana	190	2e-47
pir:A57676 protein kinase Xa21 (EC 2.7.1.-), receptor type prec...	190	3e-47
pir:S39476 kinase-like transmembrane protein TMKL1 precursor - ...	188	1e-46
pir:T02154 protein kinase homolog T1F15.2 - Arabidopsis thaliana	188	1e-46
pir:T10725 protein kinase Xa21 (EC 2.7.1.-) A1, receptor type -...	186	5e-46
pir:T05897 protein kinase homolog F6H11.160 - Arabidopsis thaliana	184	1e-45
pir:T04313 protein kinase Xa21 (EC 2.7.1.-), receptor type - rice	183	3e-45
pir:T10727 protein kinase Xa21 (EC 2.7.1.-) D, receptor type - ...	181	2e-44

FIG. 7D

Title: Isolated Polynucleotides and Polypeptides Relating to Loci  
Underlying Resistance to Soybean Cyst Nematode and Soybean  
Sudden Death Syndrome and Methods Employing Same  
Applicant(s): Lightfoot et al.  
Serial No.: 09/772,134

>pir:T46070 hypothetical protein T18N14.120 - *Arabidopsis thaliana*  
Length = 836

Score = 632 bits (1613), Expect = e-180  
Identities = 329/550 (59%), Positives = 400/550 (71%), Gaps = 2/550 (0%)  
Frame = +1

Query: 7 RSGKDGSYGYGACSGGWVGIKCAQGQVIVIQLPKGLRGRITDKIGQLQGLRKLSLHDNQIG 186  
+S +S GW GIKC +GQV+ IQLPKGL G I++KIGQL LRKLSLH+N I  
Sbjct: 72 KSWNNSSASSQVCSGWAGIKCLRGQVVAIQLPKGLGGTISEKIGQLGSLRKLSLHNNVIA 131

Query: 187 GSIPSTLGLLPNLRGVQLFNNRLLTGSTIPLSLGFCLCFKSLDLSNNLLTGAIPYSLANSTK 366  
GS+P +LG L +LRGV LFNNRLL+GSIP+SLG C ++LDLS+N LTGAIP SL ST+  
Sbjct: 132 GSVPRSLGYLKSLRGVYLFNNRLSGSIPVSLGNCPQLQNLDSNQLTGAIPPSLTESTR 191

Query: 367 LYWLNLFSNFSGPLPASLTHSFLSLSQNNNLGSGLPNSWGGNSKNGFFRLQNLILD 546  
LY LNLSFNS SGPLP S+ S++LTFL LQ+NNLSGS+P+ + NG L+ L LD  
Sbjct: 192 LYRLNLFSNLSLGPLPVSVARSYTLTFLDLQHNNLGSIPDFF---VNGSHPLKTLNLD 247

Query: 547 HNFFTGDVPASLGSLRELNEISLSHNKFSGAIPNEIGTLSRLKTL DISNNALNGNLPATL 726  
HN F+G VP SL L E+S+SHN+ SG+IP E G L L++LD S N++NG +P +  
Sbjct: 248 HNRFSGAVPVSLCKHSLLLEVSISHNQLSGSIPRECGGLPHLQSLDFSYNSINGTIPDSF 307

Query: 727 SNLSSLTLLNAENNLLDNQIPQSLGRLRNLSVLILSRNQFSGHIPSSIANISSLRQLDLS 906  
SNLSSL LN E+N L IP ++ RL NL+ L L RN+ +G IP +I NIS +++LDLS  
Sbjct: 308 SNLSSLVSLNLESNHLKGPIPDAIDRLHNLTELNLKRNKINGPIPETIGNISGIKKLDLS 367

Query: 907 LNNFSGEIPVSFDSQRSLNLFNVSYNSLSGSVPPLLAKKFNFNSSSFVGNIQLCGYSPSTPC 1086  
NNF+G IP+S L+ FNVSYN+LSG VPP+L+KKFNSSSF+GNIQLCGYS S PC  
Sbjct: 368 ENNFTGPIPLSLVHLAKLSSFNVSYNTLSGPVPPVLSKKFNSSSFLGNIQLCGYSSSNPC 427

Query: 1087 LSQAPSQGVIAPP--PEVSKHHHRKLSKTDIILIVAGVLLVLLIILCCVLLFCLIRKRS 1260  
+ + P + + HHHRKLS KD+ILI G LL +L++LCC+LL CLI+KR+  
Sbjct: 428 PAPDHHHPLTLSPTSSQEPRKHHHRKLSVKDVILIAIGALLAICLILLCCLIKKRA 487

Query: 1261 TSRPGTAKPPEGRAATMRTEKGVPPVAGGDVEAGGEAGGKLVHFDGPMFTAADDLLCATA 1440  
K +G+ T +EK V G AGGE GGKLVHFDP FTADDLLCATA  
Sbjct: 488 -----ALKQKDGDKDT--SEKTVSAGVAGTASAGGEMGGKLVHFDGPFVFTADDLLCATA 540

Query: 1441 EIMGKSTYGTVYKAILEDGSQAVKRLREKITKGHREFESEVSVLGKIRHPNVLALRAYY 1620  
EIMGKSTYGT YKA LEDG++VAVKRLREK TKG +EFE EV+ LGKIRH N+LALRAYY  
Sbjct: 541 EIMGKSTYGTAYKATLEDGNEAVKRLREKTTKGVKEFEGEVTALGKIRHQNLALRAYY 600

Query: 1621 LGPKGEKLLGFD 1656  
LGPKGEKLL FD  
Sbjct: 601 LGPKGEKLLVFD 612

FIG. 7E

Title: Isolated Polynucleotides and Polypeptides Relating to Loci  
Underlying Resistance to Soybean Cyst Nematode and Soybean  
Sudden Death Syndrome and Methods Employing Same  
Applicant(s): Lightfoot et al.  
Serial No : 09/772,134

Score = 185 bits (464), Expect = 1e-45  
Identities = 93/161 (57%), Positives = 122/161 (75%), Gaps = 3/161 (1%)  
Frame = +2

Query: 1943 GLVCLHSQENIIHGTSHPAMCGLMKNKC\*NS---DFGLFRVDVNCC\*FQRDSYSWSIGYR 2113  
GL LHS EN+IH + ++ ++ N+ D+GL R+ + + ++GYR  
Sbjct: 647 GLAHLHSNENMIH--ENLTASNILLDEQTNAHIADYGLSRLMTAAAATNVIATAGTLGYR 704

Query: 2114 APELSKLKKANTKTDIYSLGVILLELLTRKSPGVSMNGLDLPQWVASVVKEEWTNEVFDA 2293  
APE SK+K A+ KTD+YSLG+I+LELLT KSPG NG+DLPQWVAS+VKEEWTNEVFD  
Sbjct: 705 APEFSKIKNASAKTDVYSLGIIILELLTGKSPGEPTNGMDLPQWVASIVKEEWTNEVFDL 764

Query: 2294 DLMRDASTVGDELLNTLKLALHCVDPSPSARPEVHQVLQQLKRL 2425  
+LMR+ +VGDELLNTLKLALHCVDPSP+ARPE +QV++QL+ +  
Sbjct: 765 ELMRETQSVGDELLNTLKLALHCVDPSPAARPEANQVVEQLEEI 808

FIG. 7F